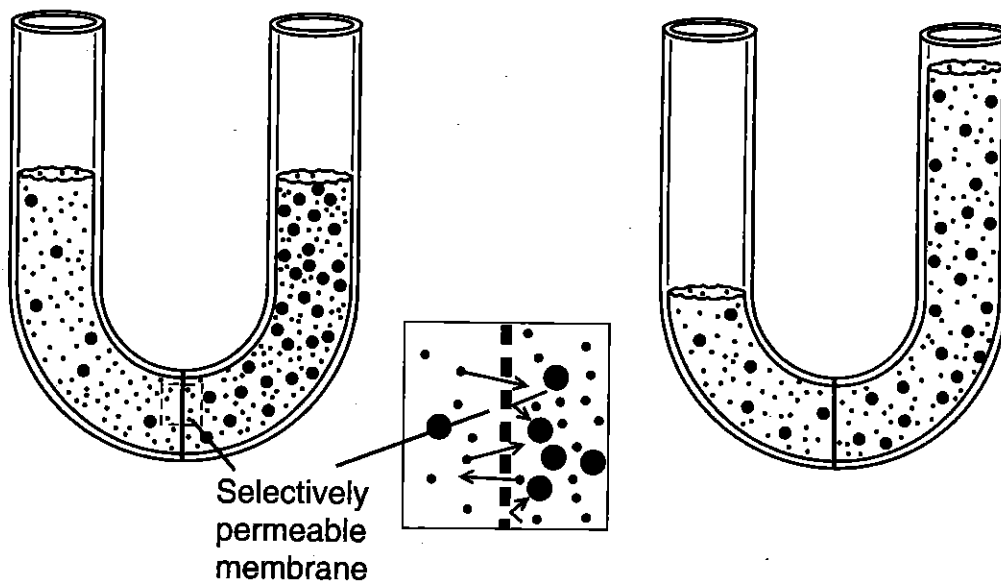


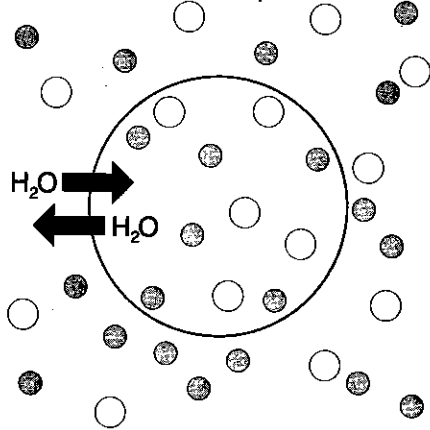
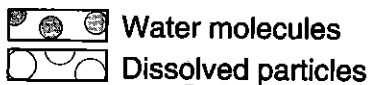
TRANSPARENCY 17 OSMOSIS

Before osmosis

After osmosis

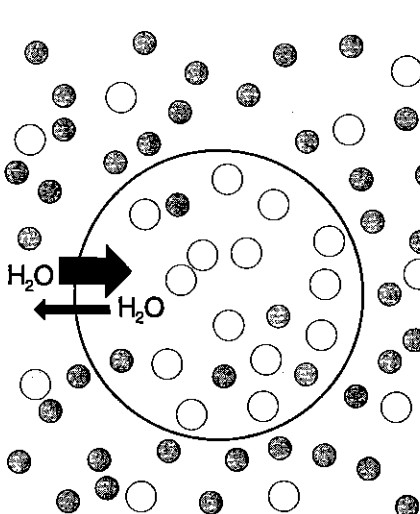


Cells in Isotonic Solution



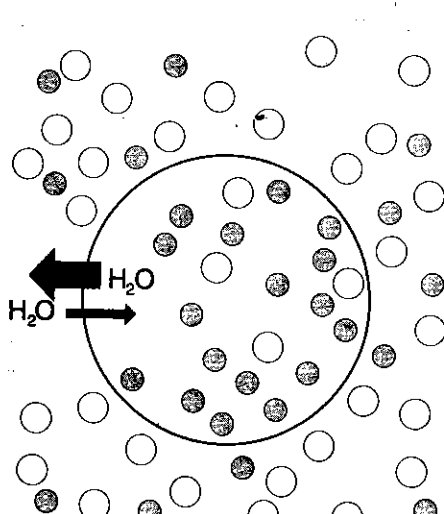
▲ In an isotonic solution, water molecules move into and out of the cell at the same rate.

Cells in Hypotonic Solution



▲ In a hypotonic solution, water enters a cell by osmosis, causing the cell to swell.

Cells in Hypertonic Solution



▲ In a hypertonic solution, water leaves a cell by osmosis, causing the cell to shrink.

TRANSPARENCY 17 OSMOSIS**USE WITH CHAPTER 9, SECTION 9.2**

1. Look at the U-shaped tube at the top of the transparency. Why did the number of water molecules on each side of the membrane change after osmosis, whereas the number of sugar molecules stayed the same? _____

2. How does the plasma membrane of a cell compare with the membrane in the U-shaped tube? _____

3. Explain the behavior of molecules in the isotonic solution. _____

4. Does osmosis occur if a cell is placed in an isotonic solution? _____

5. Why does water enter a cell that is placed in a hypotonic solution? _____

6. What happens to the turgor pressure inside a cell that is placed in a hypertonic solution? _____

7. What can happen to animal cells in a hypotonic solution? What mechanism have some protists evolved for living in a hypotonic environment? _____

8. What causes a plant to wilt? _____

